Curriculum Vitae
Wolfgang Ahrendt

Higher education degrees

– 12/1995, Diploma in Computer Science, University of Karlsruhe

Doctoral degree

– 20 July 2001, Ph.D. in Computer Science, Dept. of Computer Science, University of Karlsruhe; title: "Deductive search for errors in abstract data types"; supervisor: Reiner Hähnle

Current positions

– Since 07/2018: Professor, Department of Computer Science and Engineering, Chalmers University of Technology. Time spent in research: 50%.

Previous positions

– 12/2014 – 05/2018: Associate Professor, Department of Computer Science and Engineering, Chalmers University of Technology. Time spent in research: 50%.
– 3/2005 – 11/2014: Universitetslektor, Department of Computer Science and Engineering, Chalmers University of Technology. Time spent in research: 50%.
– 9/2001 – 2/2005: Assistant Professor, Department of Computer Science and Engineering, Chalmers University of Technology. Time spent in research: 50%.

PhD Supervision

Main supervisor of Ph.D. students:

– Philipp Rümmer, 2004 – 2008, graduated Dec. 2008, Title of thesis: *"Calculi for Program Incorrectness and Arithmetic"*. Opponent Alan Bundy. After that, P. Rümmer became post-doc at the University of Oxford. He is now assciate professor at the Department of Information Technology, Uppsala University.
– Gabriele Paganelli, 2009 – 2013, defended Licentiate degree November 2013, Title of thesis: *"Verification Based Failure Detection for Real-Time Java and Floating-Point Computations"*.
– Jesus Mauricio Chimento, 2013 – 2019, graduated June 2019, Title of thesis: *"Combined Static and Dynamic Verification of Object-Oriented Software Through Partial Proofs"*. Opponent Davide Ancona. After that, M. Chimento became post-doc at the Royal Institute of Technology (KTH), Stockholm.

Invited Talks

– Joint invited talk at FMOODS 2007 (9th. Intl. Conference on Formal Methods for Open Object-Based Distributed Systems) and COORDINATION 2007 (9th. Intl. Conference on Coordination Models and Languages), Paphos, Cyprus, June 2007.
– Invited talk at FSEN 2023 (10th IPM International Conference on Fundamentals of Software Engineering), May 2023.
– Invited talk at F-IDE 2019, 5th Workshop on Formal Integrated Development Environment (FM 2019 satellite event), Porto, Portugal, Nov. 2019.
– Invited talk at VORTEX 2018, Workshop on Runtime Verification for Object-Oriented Languages and Systems (ECOOP 2018 satellite event), Amsterdam, Netherlands, July 2018.
– Invited talk at BYTECODE 2013, the 8th Workshop on Bytecode Semantics, Verification, Analysis and Transformation (ETAPS 2013 satellite event), Rome, Italy, March 2013.

Programme, Conference, and Workshop Chair

- Programme chair (together with Heike Wehrheim) of TAP 2020, 14th International Conference on Tests and Proofs, June 2020 in Bergen, Norway.
- Programme chair (together with Lizeth Tapia) of iFM 2019, 15th International Conference on integrated Formal Methods, December 2019 in Bergen, Norway.
- Conference chair (together with Moa Johansson) of CADE-26, Conference on Automated Deduction (CORE rank A), 2017 in Gothenburg, Sweden.
- Co-organiser and co-chair of track *SpecifyThis – Bridging gaps between program specification paradigms* at ISoLA (International Symposium On Leveraging Applications of Formal Methods, Verification and Validation), 2022.
- Co-organiser and co-chair of track *A Broader View on Verification: From Static to Runtime and Back* at ISoLA (International Symposium On Leveraging Applications of Formal Methods, Verification and Validation), 2018.
- Co-organiser and co-chair of workshop VORTEX (Verification and mOnitoring at Runtime EXecution), satellite event of ECOOP 2021
- Initiated, co-organised, and co-chaired a new series of International Workshops on *Disproving*, taking place as satellite events of IJCAR 2004, CADE 2005, FLoC 2006, and CADE 2007.

Project Coordination

- Principle Investigator of WASP project *'TriCo – Triple Co-Piloting of Implementation, Specification and Tests'*, granted by the Wallenberg AI, Autonomous Systems and Software Program, 2023–2028.
- Principle Investigator of project *'Smart Contract Verification'*, granted by the Swedish Research Council (Vetenskapsrådet), 2020–2023.
- Member of Management Committee of ICT COST Action IC1402 (EU funded networking project) *Runtime Verification beyond Monitoring (ARVI)*, 2014–2018.
- Principle Investigator of project *'Unified Static and Runtime Verification of Object-Oriented Software'*, granted by the Swedish Research Council (Vetenskapsrådet), 2013–2016.
- Principle Investigator at Chalmers in the European ARTEMIS project CHARTER (ARTEMIS 2008-1-100039, 04/2009 – 06/2012), about certification of critical embedded real-time Java systems. Main contributions: deductive test case generation, floating-point verification, certifiable proofs.
- Principle Investigator at Chalmers in the FP7 FET project HATS (Highly Adaptable and Trustworthy Software using Formal Models, Project No.: FP7-231620, see www.hats-project.eu). 08/2011 – 02/2013. Main contributions to project: Compositional verification of concurrent and distributed objects, fully abstract object models.

Community Work

- Member of Steering Committee of iFM (Conf. on Integrated Formal Methods), since. Dec. 2019
- Member of Steering Committee of TAP (Conf. on Tests and Proofs), since. Sep. 2022
- Member of Skolem Award committee of the Conference on Automated Deduction (CADE), awarding test-of-time awards to CADE papers published 1/2/3 decades ago.
- Member of the Board of Trustees of the Conference on Automated Deduction (CADE), 2007-2010
- Secretary of the Association for Automated Reasoning, 2007-2010.
- ETAPS Mentoring Workshop Co-organiser, Munich, Germany, 2022, and Paris, France, 2023.
- Doctoral Symposium Co-chair at FM (International Symposium on Formal Methods), Bejing, China, 2021, and Lübeck, Germany, 2023.
- Poster and Demo Chair at ECOOP (European Conference on Object-Oriented Programming), Uppsala, Sweden, 2014.
- Workshop Co-Chair at iFM (13th Int. Conf. on integrated Formal Methods), Torino, Italy, 2017.
- Publicity Chair at SEFM (Software Engineering and Formal Methods), Koblenz, Germany, 2005.

Grant Proposal Reviewing

– Member of the Computer Science Evaluation Group at the Natural Sciences and Engineering Research Council of Canada (NSERC), for 2015 and 2016. In the second year (2016) as chair of the Computer Systems section (one of four Computer Science sections in NSERC's area classification).
– Reviewer of research grant proposals, 2004 and 2011, for the Dutch research council, NWO (Nederlandse Oranisatie voor Wetenschapelijk Onderzoek; English: Netherlands Organisation for Scientific Research).
– Reviewer of research grant proposal, 2013, for the Natural Sciences and Engineering Research Council of Canada.
– External scientific evaluator for the creation of a project team at INRIA Saclay Ile-de-France, 2013.
– Reviewer in the Irish Marie Curie fellowship programme ALECS, 2018.

Doctoral School Lecturer

– Lecturer at the Summer School on Runtime Verification, Madrid, Spain, September 23-25, 2016, co-located with the 16th International Conference on Runtime Verification. Title of lecture: *'Combined Static and Runtime Verification'*.
– Lecturer at the School on Runtime Verification, Praz sur Arly, France, March 19-21, 2018, Title of lecture: *'The Java Modeling Language - a Basis for Static and Dynamic Verification'*.

Programme Committee Member

– ICTAC 2023, the 20th International Colloquium on Theoretical Aspects of Computing
– FSEN 2023, International Conference on Fundamentals of Software Engineering
– DAPPS 2021+2022, IEEE International Conference on Decentralized Applications and Infrastructures
– TAP 2021+2022, International Conference on Tests and Proofs
– LPAR 2021+2023, International Conference on Logic for Programming, Artificial Intelligence and Reasoning
– TACAS 2018, 24th International Conference on Tools and Algorithms for the Construction and Analysis of Systems
– RV 2017+2018+2019+2020+2021, International Conference on Runtime Verification
– iFM 2016+2019+2020+2023, International Conference on Integrated Formal Methods
– SEFM 2013+2014+2015+2016+2017+2019+2020, International Conference on Software Engineering and Formal Methods
– SYNASC 2016+2017+2018, International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Logic and Programming track
– TMPA 2017, 4th International Tools and Methods of Program Analysis Conference
– ITP 2013, the 4th Conference on Interactive Theorem Proving
– FCT 2011, the International Symposium on Fundamentals of Computation Theory
– ACM Symposium On Applied Computing, Software Verification and Testing track, 2010+2011+2020+2021+2022
– FMBC, International Workshop on Formal Methods for Blockchains, 2020+2022
– FTfJP 2020, 22st Workshop on Formal Techniques for Java-like Programs
– PrePost 2016, 1st International Workshop on Pre- and Post-Deployment Verification Techniques
– WADT 2020, International Workshop on Algebraic Development Techniques
– LSFA 2015, the 10th Workshop on Logical and Semantic Frameworks, with Applications
– FMI 2015, International Workshop on Formal Methods Integration
– FMBC 2019+2022, Workshop on Formal Methods for Blockchains
– VORTEX 2016+2018+2022, International Workshop on Verification of Objects at RunTime EXecution
– VERIFY Workshop 2012, affiliated with the International Joint Conference on Automated Reasoning 2012
– TTSS'09, 3rd International Workshop on Harnessing Theories for Tool Support in Software, 2009

- BYTECODE'09, 4th International Workshop on Bytecode Semantics, Verification, Analysis and Transformation, 2009
- International Workshop on the Implementation of Logics, 2006+2008
- 9th International Workshop on Discrete Event Systems, 2007
- Journal of Applied Logic, Special issue on the Empirically Successful Computerized Reasoning, 2007
- Journal of Automated Reasoning, Special issue on Empirically Successful Automated Reasoning, 2006

Habilitation, PhD, and Licentiate Examination Activities

- Reviewer, University of Kaiserslautern (D), PhD defense of Peter Zeller, title *"Tool Supported Specification and Verification of Highly Available Applications"*, Sep 2020
- Member of grading committee, Complutense University of Madrid (ES), PhD defense of Miguel Isabel, title *"Verification of concurrent systems: optimality, scalability and applicability"*, June 2020
- Reviewer, University of Genoa (IT), PhD defense of Luca Franceschini, title *"RML : Runtime Monitoring Language"*, Mar 2020
- Member of grading committee, University of Twente (NL), PhD defense of Wytse Oortwijn, title *"Deductive Techniques for Model-Based Concurrency Verification"*, Dec. 2019
- Member of grading committee, Mälardalen University (SE), PhD defense of Nesredin Mahmud, title *"Design of Assured and Efficient Safely-critical Systems"*, June 2019
- Reviewer (rapporteur), University Paris-Sud (FR), PhD defense of Mário Parreira Pereira, title *"Tools and Techniques for the Verification of Modular Stateful Code"*, Dec. 2019
- Reviewer (rapporteur), University Paris-Saclay (FR), Habilitation defense of Nikolai Kosmatov, title *"Combinations of Analysis Techniques for Sound and Efficient Software Verification"*, Nov. 2019
- Examiner (examinateur), University Paris-Saclay (FR), Habilitation defense of Julien Signoles, title *"From Static Analysis to Runtime Verification with Frama-C and E-ACSL"*, Jul. 2018
- Reviewer (rapporteur), University Paris-Sud (FR), Habilitation defense of Stéphane Graham-Lengrand, title *"Polarities & Focussing: A Journey From Realisability to Automated Reasoning"*, Dec. 2014
- Reviewer, Karlsruhe Institute of Technology (D), PhD defense of Thorsten Bormer, title *"Advancing Deductive Program-Level Verification for Real-World Applications — Lessons Learned from an Industrial Case Study"*, Oct 2014
- Reviewer, Technical University of Madrid (ES), PhD defense of José Miguel Rojas, title *"Test Case Generation in Object Oriented Programming"*, supervisors Elvira Albert and Miguel Gomez-Zamalloa, Dec. 2013
- Opponent, KTH Stockholm (SE), Licentiate defense of Pedro de Carvalho Gomes, title *"Sound Modular Extraction of Control Flow Graphs from Java Bytecode"*, supervisor Dilian Gurov, Dec. 2012
- Examiner (examinateur), L'Université Paris Diderot (FR), PhD defense of Séverine Maingaud, title *"Certification de Programmes Imératifs en Logique Dynamique"*, supervisor Alexandre Miquel, Dec. 2011
- Opponent, University of Olso (NO), PhD defense of Johan Dovland, title *"Incremental Reasoning about Distributed Object-Oriented Systems"*, supervisors Olaf Owe and Einar Broch Johnsen, Jan. 2009
- Discussion leader ('discussionsledeare', which is in practice some kind of opponent), Chalmers University of Technology, Department of Signals and Systems, Licentiate defense of Kristin Andersson, Jun. 2006 (Note that, even if this was a defense at my own university, I was asked by a different department, 'Signals and Systems', to be discussion leader for one of their students.)
- Member of grading committee, Chalmers University of Technology, PhD defense of Daniel Hedin, title *"Program Analysis Issues in Language Based Security"*, Sep. 2008
- Member of grading committee, Chalmers University of Technology, PhD defense of Raul Barbosa, title *"Layered Fault Tolerance for Distributed Embedded Systems"*, Dec. 2008

- Member of grading committee, Chalmers University of Technology, PhD defense of Kristin Andersson, title *"On Error-Induced Restart Functionality and Control Function Generation for Flexible Manufacturing Systems"*, Sep. 2009
- Member of grading committee, University of Gothenburg, PhD defense of Anders Mötberg, title *"Formalizing Refinements and Constructive Algebra In Type Theory"*, Dec. 2014

Reviewer

Apart from the aforementioned activities in PCs, I acted as reviewer in the peer-review process of the following conferences and journals.

- CADE (Conference on Automated Deduction), 2002, 2003, 2007; TABLEAUX (Conference on Automated Reasoning with Analytic Tableaux and Related Methods), 1997, 1998, 1999, 2000, 2002, 2005, 2009; IJCAR (International Joint Conference on Automated Reasoning), 2001; AISC (International Conference on Artificial Intelligence and Symbolic Computation), 2002; FTP (International Workshop on First-Order Theorem Proving), 2000; J.UCS (Journal of Universal Computer Science, 7(11), Special Issue on Abstract State Machines), 2001; APLAS (The Second ASIAN Symposium on Programming Languages and Systems), 2004; SOS (Workshop on Structural Operational Semantics), 2005; SEFM (IEEE Conference on Software Engineering and Formal Methods), 2005, 2007; LPAR (Conference on Logic for Programming Artificial Intelligence and Reasoning), 2005, 2010; FMCO (Symposium on Formal Methods for Components and Objects), selected papers, 2006; TACAS (Conference on Tools and Algorithms for the Construction and Analysis of Systems), 2006; JELIA (10th European Conference on Logics in Artificial Intelligence), 2006; Annals of Mathematics and Artificial Intelligence (journal), selected papers from JELIA'06, 2006, and special issue on First-Order Theorem Proving, 2008; Software and Systems Modeling (journal), 2007; Science of Computer Programming (journal), 2007, 2013, 2016; Logical Methods in Computer Science (journal), 2007, 2021; Journal of Logic and Algebraic Programming, 2008, 2011; VMCAI (Conference on Verification, Model Checking, and Abstract Interpretation), 2010, 2014; ESOP (European Symposium on Programming), 2010; Journal of Systems and Software, 2011; FM (International Symposium on Formal Methods), 2011; Journal of Logic and Computation, 2013; Formal Aspects of Computing (journal), 2014; Software: Practice & Experience, 2014; Formal Methods in System Design (journal), 2016; Journal of Logical and Algebraic Methods in Programming, 2017, 2020; ITP (Conference on Interactive Theorem Proving), 2018; Journal of Automated Reasoning, 2019; IEEE Transactions on Reliability, 2019; FASE (Conference on Fundamental Approaches to Software), 2020; FOSSACS (Conference on Foundations of Software Science and Computation Structures), 2020; ACM Conference on Computer and Communications Security (ACM CCS), 2020; Software Testing, Verification and Reliability (journal), 2020; Transactions on Computational Logic (journal), 2022 ACM Transactions on Software Engineering and Methodology (journal), 2023

Invited Ph.D. course

- *'Software Verification with KeY'*,
  at Technical University of Madrid (UPM) and Complutense University of Madrid, Spain, June 24 - 30, 2010. The course was financed by the Spanish Ministry of Education, in the frame of a competitive funding scheme for courses taught by scientists from non-Spanish universities.

Tutorials

- *'The KeY System and Framework'*,
  together with Bernhard Beckert, Richard Bubel, Peter H. Schmitt,
  invited tutorial at the conference of International Conference on Interactive Theorem Proving (ITP) 2011, Nijmegen, The Netherlands, August 2011
- *'Verifying Object-Oriented Programs with KeY: A Tutorial'*,
  together with P. Rümmer,
  at 5th International Symposium on Formal Methods for Components and Objects (FMCO'06), Amsterdam, The Netherlands, November 2006

- *'Integrating Object-oriented Design and Deductive Verification of Software'*,
  together with R. Hähnle, V. Klebanov, P. Rümmer,
  at the International Conference on Automated Deduction, CADE-18, Tallinn, Estonia, July 2005

International By-Invitation-Only Events

- 'Dagstuhl Seminars' (one week by-invitation workshops at the Schloss Dagstuhl Leibniz-Zentrum für Informatik): *'Abstract State Machines'* (2002) *'Divide and Conquer: the Quest for Compositional Design and Analysis'* (2012), *'Engineering Resilient Systems: Models, Methods and Tools'* (2013), *'Deduction and Arithmetic'* (2013), *'A Shared Challenge in Behavioural Specification'* (2017), *'Principles of Contract Languages'* (2020), *Principles of Contract Languages* (2022), *Integrated Rigorous Analysis in Cyber-Physical Systems Engineering* (2023)
- 'Lorentz Center Workshops' (one week by-invitation workshops at the Lorentz International Center for workshops in the Sciences, Leiden, NL): *'Reliability of Concurrent and Distributed Software'* (2014), *'JML: Advancing Specification Language Methodologies'* (2015), *'Verification of Concurrent and Distributed Software: Towards Industrial Use'* (2015)
- 'Shonan Meetings' (one week by-invitation workshops organised by the National Institute of Informatics, Japan): *Static Analysis meets Runtime Verification* (2015)
- 'Bertinoro Workshops' (one week by-invitation workshops at the University Residential Centre of Bertinoro, Italy): *'Distributed Runtime Verification'* (2016)
- Track 'Static and Runtime Verification: Competitors or Friends?', at ISoLA (5th International Symposium on Leveraging Applications of Formal Methods, Verification, and Validation), Greece (2016)
- Track 'Reliable Smart Contracts: State-of-the-art, Applications, Challenges and Future Directions', at ISoLA (9th International Symposium on Leveraging Applications of Formal Methods, Verification, and Validation), Greece (2020)
- Track 'X-by-Construction meets Runtime Verification', Greece (2022)

PhD Education

- Director of Doctoral Studies, Graduate school Computer Science and Engineering (since 12/2016)
- Pedagogical course *'Supervision of Research: Principles, Models and Issues'* (TLE202, also called 'Forskarhandledarutbildning'), 2007
- Developed and gave PhD course: *'Algebraic Specification of Abstract Data Types'*, 2003
- Co-supervisor of Nishant Parekh, Yuvaraj Selvaraj, Simon Robillard, Yu-Ting Chen, Ann Lilleström
- Member of PhD advisory group for Bart van Delft, Ramona Enache, Negin Fathollah Nejad Asl, Marie Gustafsson, Ran Ji, Fredrik Lindblad, Willard Rafnsson, Daniel Schoepe, Angela Wallenburg
- Volunteered for participation in *'PhD Mentor Programme'*, including 3 half-days workshops on PhD mentor-ship (2006), and acting as mentor for Ulf Larson (2006 – 2009). (The role of the mentor was to be an general adviser for a PhD student, in addition to, and complementing, the normal, subject-centric PhD supervision, regularly meeting the student, giving advice in matters that concern the student's personal and professional development, career, work, etc.)

International Research and Teaching Visits (≥ 1 week):

- Department of Computer Science (Prof. Gordon Pace), University of Malta, Malta, March 2020, 2022, 2023
- Institute of Computer Science (Prof. Margaria), University Potsdam, Germany, June 2013
- Institute of Cybernetics (Prof. Uustalu), Tallinn University of Technology, Estonia, August 2012
- Department of Programming Languages and Systems (Prof. Puebla), Technical University of Madrid, Spain, June 2010
- Centrum Wiskunde & Informatica (CWI) (Prof. de Boer), Amsterdam, Netherlands, April 2009.
- Department of Intelligent Systems (Prof. Hasegawa), Kyushu University, Fukuoka, Japan, September 1999.

- Department of Mathematics and Computer Science (Prof. Cantone), University of Catania, Italy, September 1998.
- Department of Intelligent Systems (Prof. Hasegawa), Kyushu University, Fukuoka, Japan, September 1998.

Educational Leadership and Activities

- Head of pre-Bologna MSc programme
  'Dependable Computer Systems' at Chalmers (2005 – 2007).
- Developer and head of Bologna MSc programme
  'Secure and Dependable Computer Systems' at Chalmers (2007 – 2008).
- Head of pre-Bologna Magister programme
  'Computer Science (Datavetenskap)' at University of Gothenburg (2005 – 2007).
- Developer and head of Bologna BSc and MSc programmes
  'Computer Science (Datavetenskap)' at University of Gothenburg (2007 – 2010).
- Head of the engineering (civilingenjör) programme *'IT (Informationsteknik)'* at Chalmers, consisting of Bachelor programme in IT and two MSc programmes, *Software Engineering* and *Interaction Design and Technologies* (Feb. 2010 – Dec. 2015).
- During the *evaluation of the engineering educations by Högskoleverket* (Swedish National Agency for Higher Education), 2012 – 2013, W. Ahrendt performed the evaluation work for the IT programme. This included writing 70 pages of self-evaluation documents for the three degrees BSc, MSc, and 'Civilingenjör', in IT.
- Published (with R. Bubel and R. Hähnle) the article *'Integrated and Tool-Supported Teaching of Testing, Debugging, and Verification'* at the Second International Conference on Teaching Formal Methods, 2009, Springer, Lecture Notes in Computer Science 5846.
- Organised and chaired, together with Patrik Jansson, the annual *Workshop of the Swedish National Network for Engineering Education in Computer Science and Engineering, Software Engineering, and Media Technology, DITMED*, Gothenburg, 2012.
- Member of the evaluation committee for the MSc program 'Information Systems' of the Norwegian University of Science and Technology (NTNU) in Trondheim, 2015.
- Invited panellist at the *'Panel on Education in Dependable and Resilient Computing'*, at the Sixth European Dependable Computing Conference (EDCC-6), Coimbra, Portugal, 2006.
- Member of task force *'Curriculum in Resilient Computing'* and *'Resilient Computing Courseware'*, in the frame of the European Network of Excellence *'Resilience for Survivability in IST'*, 2006 – 2007.
- Participated in literature seminar *'Genus Aspects of Engineering Education*, held by genus researcher Minna Salminen-Karlsson, Uppsala Universitet, 4 half days, 2011 – 2012.
- Organised various teachers workshops on *'Genus Aspects'*, *'Personal Development'*, and *'Learning Sequences'* for teachers of IT programme, Chalmers, 2011 and 2012.
- Of the meetings/workshops of the steering committee of the IT programme, organised every third month by W. Ahrendt, my *'Workshop on Programme Descriptions'* was recommended by Chlamers as a blueprint for workshops on the same topic for all Chalmers programmes.
- Wolfgang Ahrendt established (with Gerardo Schneider), and participated in, an Erasmus Teachers Exchange with the University of Potsdam, Germany, June 2013. He held 4 lectures, in courses *'Formal Methods in System Design'* and *'Critical Thinking: Logic and Argumentation'*. Two of the lectures were broadcasted, via video-conference, to the University of Dortmund.

Alumni

The following former students, supervised in their Master thesis projects by W. Ahrendt, became PhD students after that.

- Martin Giese, became PhD student at Karlsruhe University, now associate professor at the University of Oslo,
- Ralf Sasse, became PhD student at the University of Illinois at Urbana-Champaign, now post-doc at ETH Zürich.

– Maximilian Dylla, became PhD student at Saarland University, Saarbrücken, now works at Google Paris.

All their Master theses lead to conference publications, in case of M. Dylla to one conference and one journal publication.

Nominations for Pedagogical Prize

– Nomination, 2004, for *Pedagogical Price of the IT students*, for the courses 1) and 2) listed below.
– Three nominations, 2016+2018+2021, for *Pedagogical Price of the IT students*, for the course 4) listed below.

Course Development and Teaching

1. Developed course *Object-Oriented Programming, advanced course*, taught it 2001 – 2007.
2. Developed course *Project Course IT1*, taught it 2002 – 2005.
3. Co-developed course *Testing, Debugging, and Verification* (TDV), taught it 2007 – 2011.
4. Co-developed course *Software Engineering using Formal Methods* (SEFM), taught it 2007 – 2016. Redesiged into course *Formal Methods for Software Development* (FMSD), since 2017.

All these courses were developed or co-developed by W. Ahrendt from scratch, and are given at Chalmers University of Technology and University of Gothenburg until today. Material I developed for TDV and FMSD/SEFM has been used at the following universities by local teachers: Indian Institute of Technology Bhubaneswar (India), University of Iowa (US), University of Rennes (FR), Ludwig Maximilian University of Munich (D), Technical University Darmstadt (D), RISC (Research Institute for Symbolic Computation, Austria), Universidad Politecnica de Madrid (ES), University of Innsbruck (Austria), University of Bucharest (RO), Carnegie Mellon University (US), Université de Franche-Comté (FR), Institute of Software, Chinese Academy of Sciences, Beijing (China), Technical University Braunschweig (D), Stevens Institute of Technology in Hoboken (US), Brigham Young University (US), IMT Atlantique (Ecole de Mines de Nantes, FR)

Commissions of Trust

– Elected member of the Steering Board of the IT Faculty, University of Gothenburg (2015-07 – 2019-11).
– Elected co-chair of the departmental faculty meeting (Institutionskollegieordförande), department of Computer Science and Engineering (2015-2018).
– Elected 'inspektor' (senior advisor) of the student section of the engineering (Civilingenjör) programme *'IT (Informationsteknik)'* at Chalmers, 2017 – 2023.